A TAEWOONG MEDICAL NEWSLETTER
OCT 2017 / ISSUE 8

We connect your life

CONNECT

TaeWoong MEDICAL

The new look of

TAEWOONG MEDICAL

Taewoong Medical story began in 1991 as a small medical device company indulged in serving health care facilities. From there, with nearly 30 years of strong professional background in medical production and technology, we've grown to become a leading medical device brand and still continuing to expand our facilities to match our state of the art product developments for better contribution to the medical field. Taewoong now has more than 70 distributors around the world.

We are currently under factory site facelift to create a delightful environment for the employees in order to utilize the inherent skills of all Taewoong employees along with energizing each individual to better focus on product quality.

Taewoong medical will always do our utmost to develop skills, knowledge and expertise to fulfil product quality, maximizing healthful life of patients now and forever.

[Design drawing of Taewoong Medical]

Life Connector

Create a new passage for **O**ur life long happiness and fulfillment through **N**ature oriented development. **N**ew platform for **E**qual value of human life will be provided by **C**onstantly evolving company, **T**aewoong Medical

Taewoong Performance of the year 2017

Experiencing diversity of Taewoong & Global partners

Chicago, USA 7~9 May

We participated in DDW 2017 which took place in Mccormick Place, Chicago, U.S.A.

Installed product display & hands on zone to maximize expositions and visitors to better learn about the Taewoong products.

Also amenities such as reception area with charging stations, and a separate meeting rooms were set up to allow visitors to rest and interact with individuals and retreat from hectic and busy exhibit floor.

Second day of DDW, about 180 doctors and distributors from all over the world enjoyed Taewoong dinner party with tremendous view of Chicago on the Cruise. The invited band played music during dinner followed by dance party with the DJ. All had a great time and look forward to 2018 Taewoong party. See you soon!

(DDW 2018 : June 2~5, Washington Convention Center)

The 1st Dinner Symposium by DWD Medical – Taewoong USA

Los Angeles, USA 23 August

On August 23rd 2017, DWD Inc., a subsidiary and the exclusive distributor of TaeWoong Medical in the US, successfully sponsored and hosted our first dinner symposium event for the US market. The main speaker at the event was Dr. Kamran Ayub who is renowned in the field of advanced endoscopy internationally, and he had held NIH Grant on Barrett's Esophagus (2002-2008) and served in prestigious positions such as the Chief of Endoscopic Ultrasound at Baylor College, TX and the Director of Advanced Endoscopy Fellowship at Virginia Mason Medical Center, WA.

Dr. Ayub currently practices out of Silver Cross Hospital serving greater Chicago area, and is a regional celebrity in performing the most novel and innovative endoscopic procedures. TaeWoong's TTS esophageal stent with its accommodating and compact delivery system had proved its versatility and inspired many physicians, including Dr. Ayub, for various procedures.

The lecture began with the introduction and promotion of our products, with key advantages of our TTS esophageal stents especially highlighted, and went over some clinical cases. The Dinner Symposium took place at the famous Mike Ditka's Restaurant in a suburb of Chicago. From the regional hospitals, we had about 25 physicians attended and the event was an effective method to facilitate discussion of the wide possibility amongst the physicians.

An inside look at the Taewoong Factory

Gyeonggi-do, Korea 7 Sep

2017 SGI conference was held at Incheon Grand Hyatt. During the conference period, we invited 60 doctors and partners from 15 countries to Taewoong headquarters for a factory tour to experience the history and technologies, to learn about the skills involved in stent production by taking a tour of the factory. Then enjoyed traditional Korean dining all together.

Focused on new product training of EUSRA™

"We have been continuing product training program since launch."

The 2nd AERAT in Asan medical center instructed by Prof. Dong Wan Seo

Seoul, Korea / 6~7 January

Twelve doctors from India, Japan, Hong Kong, Malaysia and Singapore participated in hands-on training with pigs, followed by product announcements and Q & A.

The 3rd EUSRA™ master class in Nord Hospital instructed by Prof. Marc Barthet

Marseille, France / 2~3 May

Following last year, this was third time with Prof. Barthet. With welcome dinner on the first day, case observation in the morning (4 cases) and hands-on with pigs & product presentation on the second day. 15 doctors from 5 countries participated and the 4th will be held in November.

EUSRA™ Training in Selayang Hospital instructed by Dr. Lee Tiong See

Malaysia, 4 August

With the cooperation of Dr. Lee and local distributor of Medipro, EUSRA™ training was held for the first time in Malaysia successfully with total 8 doctors from Singapore and Malaysia.

Abstract of APDW 2017

Feasibility and safety of EUS-guided gallbladder stenting with lumen apposing metal stent (SPAXUS™) in patients with acute cholecystitis who are unsuitable for cholecystectomy: pilot study in single center

AY Teoh [1]; S Lakthakia [2]; A Bapaye [3]; R Reknimitr [4]; T Ratranachu[5]; T Itoi [6]; M Kitano [7]; N Youske [8]; JH Moon [9]

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Background

Metallic stents are increasingly employed for EUS-guided drainage of pancreatic fluid collections (PFC). Recently, a novel self-approximating lumen apposing metallic stent (LAMS) specifically designed for EUS deployment has become available. The aim of this study was to evaluate the outcomes of using stent for drainage of PFC.

Methods

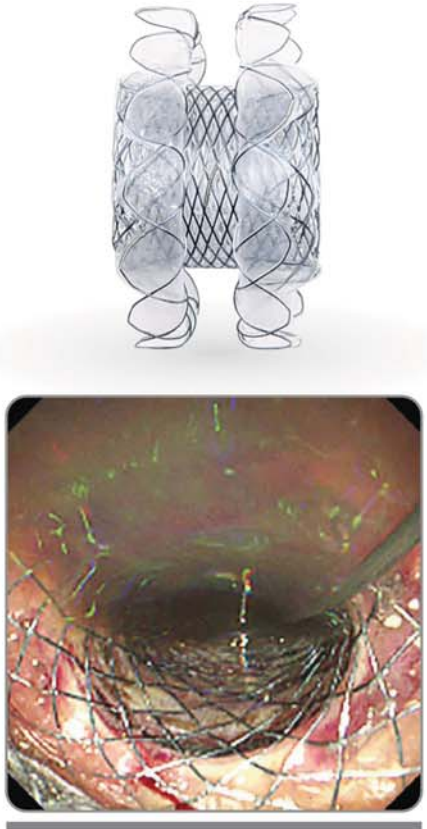
This was a prospective multi-centred cohort study conducted in 8 high volume institutions across Asia. Consecutive patients suffering from pancreatic pseudocyst or walled-off necrosis requiring EUS-guided drainage were recruited. Drainage was performed with a novel self-approximating LAMS (Niti-S SPAXUS™, Taewoong Medical, Korea). Outcomes included technical and clinical success, adverse events, procedural, interventions through the stent and recurrence rates.

Results

Between August 2016 and May 2017, 24 patients were recruited to the study. The mean (S.D) age was 46.0 (17.0) years old and 18 were male. 12 patients had walled-off pancreatic necrosis and the mean (S.D.) size of the PFCs were 12.2 (4.9) cm. The technical and clinical success rates were 100% respectively. The mean (S.D.) procedural time was 30.9 (17.8) minutes. None of the patients had intra-procedural adverse events. 1 patient (4.2%) suffered from bleeding 4 days after stenting. A total of 31 sessions of necrosectomy were performed in 7 patients. None of the patients suffered from recurrence during a mean (S.D.) follow-up time of 57.9 (84.6) days.

Conclusions

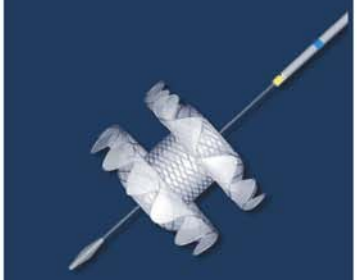
EUS-RFA management of pancreatic NET or pancreatic cystic tumors is safe with a 10 % complication rate that could be decreased with an improved prophylactic protocol study. Looking to antitumoral treatment, promising results are yielded by the initial follow-up.



The SPAXUS™ stent and the appearance after placement in a PFC

PRODUCT EXPERIENCE

A prospective, multi-center, single arm, non-inferiority, open-label, pivotal study to evaluate the effectiveness and safety of endoscopic ultrasound-guided transluminal drainage with SPAXUS™ for the treatment of pancreatic pseudocyst



Jong Ho Moon[1], Sang Soo Lee[2], Jong Kyun Lee[3], Seung Ok Lee[4], Chang Min Cho[5] and Se Woo Park[6]

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Background and Aim

The purpose of this study is to evaluate the effectiveness and safety of Niti-S SPAXUS™ Stent, a lumen-apposing, fully covered, self-expandable metal stent, being used for endoscopic ultrasound (EUS)-guided transluminal drainage for the treatment of pancreatic pseudocyst.

Methods

This study was designed a prospective, multi-center, single arm, non-inferiority, open-label. From March 2016 to March 2017, 35 patients (27 men; mean age, 52.51±13.22 years) with symptomatic pancreatic pseudocyst underwent EUS-guided transluminal drainage with 'Niti-S SPAXUS™ Stent at 6 tertiary care centers. Pancreatic pseudocysts were accessed transgastric (n=28) or transduodenal (n=7) route by using cystotome or needle knife as per the endoscopist's preference. Patients were individually followed prospectively and consecutive subject data was collected at discharge, stent removal (Day 30 or 60), and Day 20 post Niti-S SPAXUS™ stent removal. Effectiveness outcomes included technical success, clinical success, stent lumen patency, successful stent removal and procedure time. Safety outcomes included procedural and/or device related serious adverse events (AEs) and other all AEs.

Results

34 subjects were included to evaluate effectiveness outcomes. One subject was not evaluable because of another pseudocyst connected to target one. The mean size of pseudocysts was 9.23±3.54 cm (range, 6.0~18.0 cm). Niti-S SPAXUS™ Stent was placed successfully in 33 of 34 attempts (97.06%).

The clinical success could be achieved in 33 of 34 (97.06%). The stent lumen patency rate was 100% (34/34) and all stent was successfully removed (100%). The mean procedural time was from insertion of the endoscopy to removal was 1074.88±618.30 sec (median, 937.5 sec; range, 266.00 ~3061.00 sec) and from needle puncture to removal was 618.12±341.63 sec (median, 563.0 sec; range, 43.00~1558.00 sec). Procedural and/or device related adverse events (5.71%) included stent migration (n=1) and iatrogenic pneumoperitoneum (n=1). All subjects were completely recovered from the AE. Bleeding due to the stent was not observed.

Conclusions

This study showed that EUS-guided transluminal drainage using Niti-S SPAXUS™ Stent, a lumen-apposing, fully covered, self-expandable metal stent, is technically feasible, effective and safe for the treatment of symptomatic pancreatic pseudocyst.

Table 1. Demographics of Subjects

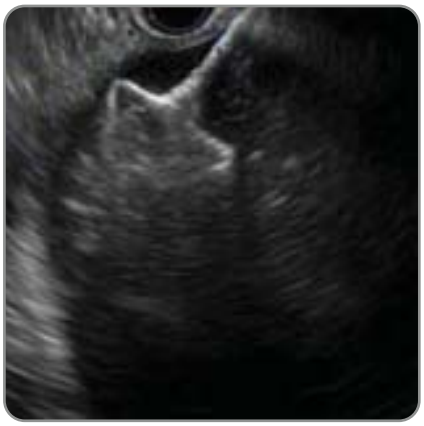
Characteristics		Subject (n=35)
Sex	Male	27 (77.14)
	Female	8 (22.86)
Age (year)	Mean	52.51±13.22
	Median	54
	Range	22 ~ 77
Etiology	Idiopathic	1 (2.86)
	Alcohol	16 (45.71)
	Gallstone	4 (11.43)
	Post-surgical	13 (37.14)
	Trauma	0 (0)
	Other (Hypertriglyceridemia)	1 (2.86)
Communication with Pancreatic duct	Communicating Pseudocyst	7 (20.00)
	Non-communicating Pseudocyst	28 (80.00)
Size of Pseudocyst (cm)	Mean±SD	9.23±3.54
	Median	8.00
	Min, Max	6.00, 18.00
Fluid content	≥ 70%	35 (100)
	< 70%	0 (0)

n (%)

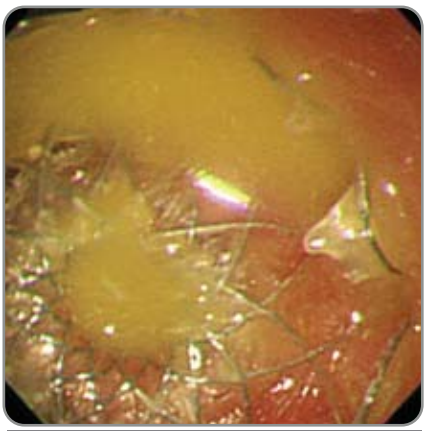
Table 2. Procedure details and Outcomes

Characteristics	Subject (n=34)
Clinical Success	97.06 (33/34)
Day 30 visit	82.35 (28/34)
Day 60 visit	83.33 (5/6)
Technical Success	97.06 (33/34)
Stent Lumen Patency	100 (34/34)
Stent removal Success	100 (34/34)
Procedure Time (sec)*	
From insertion of endoscopy	
Mean±SD	1074.88±618.30
Min, Max	266.00, 3061.00
From needle puncture	
Mean±SD	618.12±341.63
Min, Max	43.00, 1558.00
Adverse events	5.71 (2/35)

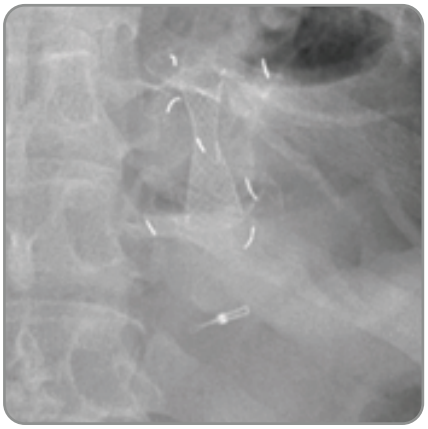
n (%) / *It was measured to the time point at the endoscopy was removed.



Deployment SPAXUS™ under EUS-guidance



Endoscopic view of PFC drainage through SPAXUS™



Fluoroscopic image of Fully deployed SPAXUS™

Feasibility and safety of EUS-guided gallbladder stenting with lumen apposing metal stent (SPAXUS™) in patients with acute cholecystitis who are unsuitable for cholecystectomy : pilot study in single center

Sang Soo Lee, MD, PhD, Dong Hui Cho, MD, Tae Jun Song, MD, PhD

Department of Gastroenterology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea

PRODUCT EXPERIENCE

Sang Soo Lee, MD, PhD

Department of Gastroenterology,
University of Ulsan College of Medicine,
Asan Medical Center

Background and Aims

Endoscopic ultrasound (EUS) guided gallbladder drainage increasingly accepted as an effective alternative to percutaneous drainage in a patient who needs drainage for acute cholecystitis. Stent migration, occlusion and bile leakage are the main obstacles in EUS guided GB stenting with metal stent. To overcome these adverse events and short patency duration of conventional metal stent, lumen apposing metal stent has recently been introduced in this procedure. The aim of this study was to evaluate the feasibility and efficacy of EUS-guided GB drainage with a new lumen apposing metal stent (SPAXUS™) in patients with acute cholecystitis who are unsuitable for cholecystectomy.

Method

A prospective, single-arm, feasibility study of EUS-guide GB drainage with SPAXUS™ is now enrolling patients at Asan Medical Center. Between January and September 2017, a total of 18 patients were treated with EUS-guided GB drainage with SPAXUS™. Baseline characteristics and outcomes including technical/clinical success rate, adverse event, and recurrence rate were evaluated.

Result

A total of 18 consecutive patients (mean age 71.7; 12 male and 6 female) underwent EUS-GB stenting with lumen apposing metal stent for acute cholecystitis (12 calculous, 2 acalculous, 4 malignant obstruction of cystic duct). Mean Charlson's comorbidity index was 6.2 (3.0-11.0) and ASA classification of enrolled patient was III in 11, IV in 2 and advanced malignancy in 5. Purpose of EUS guided GB stenting was urgent drainage in 14 and establish of internal drainage before percutaneous transhepatic gallbladder drainage (P-GBD) removal in 4 patients. Technical and clinical success rate was 94.4% and 100% and 2 early adverse event (1 stent occlusion by food material and 1 pyloric ring obstruction by proximal flange of SPAXUS™). Mean procedure time was 11.9 (6-20) minutes. One case of stent occlusion was occurred 30 days after the procedure (late adverse event) and it was not occurred after adding plastic stent through SPAXUS™ endoscopically. In 7 patients, direct cholecystoscopy was conducted one or two days after EUS-guide GB stenting. P-GBD removal was possible in all 4 patients who underwent EUS-GB stenting for internal drainage before P-GBD removal.

Conclusion

EUS-guided GB drainage with SPAXUS™ was conducted effectively and safely in our institute until now. Further multicenter experience would be helpful to clarify the role of this procedure.

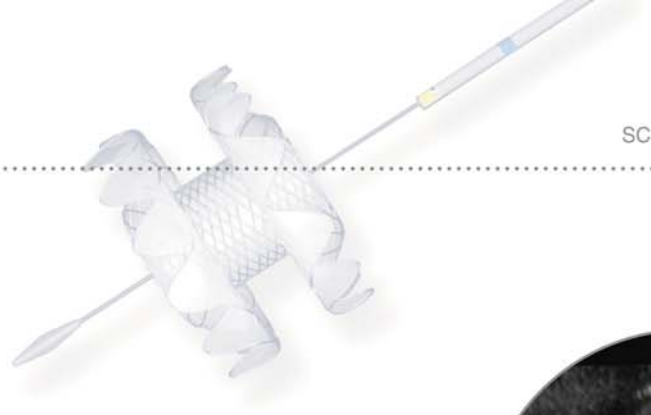
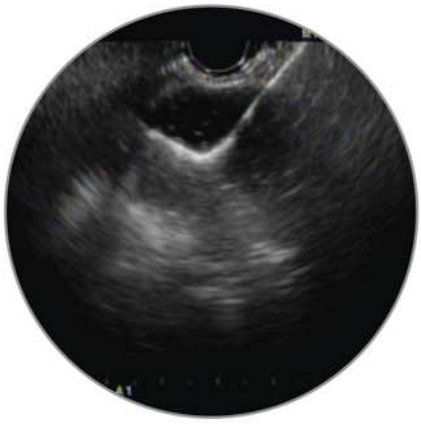
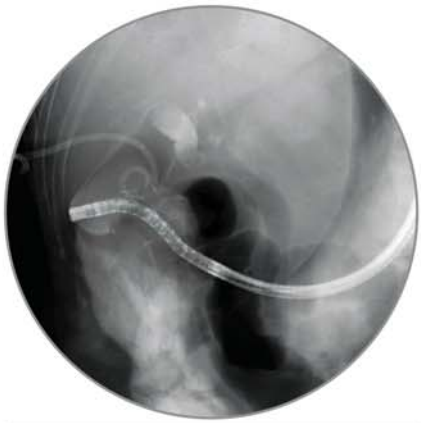


Table 1. Baseline characteristics of patients	
EUS-GB stenting with SPAXUS™ (n=18)	
Age	71.7 (50-92)
Male:Female	12:6
Causes of cholecystitis	
Calculous cholecystitis	12 (66.7%)
Acalculous cholecystitis	2 (11.1%)
Malignant obstruction of cystic duct	4 (22.2)
Charlson's comorbidity index	6.2 (3.0-11.0)
ASA classification	
III	11 (61.1%)
IV	2 (11.1%)
Advanced malignancy	5 (27.8 %)
Purpose of EUS-GB stenting	
Urgent drainage for acute cholecystitis	14 (77.37%)
Internal drainage before P-GBD removal	4 (22.3%)
Initial laboratory data	
WBC (X 10^3 /uL)	12.5 (3.8-29.5)
Platelet (X 10^3 /uL)	198 (73-327)
CRP (mg/dL)	6.35 (2.48-14.42)

Table 2. Procedure details and outcomes	
EUS-GB stenting with SPAXUS™ (n=18)	
Procedure time (mean, range, min)	11.9 (6-20)
Needle knife for fistula dilatation	18 (100%)
Balloon dilatation	0
Technical success	17/18 (94.4%)
Clinical success	17/17 (100%)
Early adverse event	
Pyloric ring obstruction	1
Stent occlusion	1
Late adverse event	
Stent occlusion	1
Direct cholecystoscopy	7 (38.9%)



SPAXUS™ deployment in Gallbladder under EUS-guidance



Insertion of endoscope through the SPAXUS™

Direct cholecystoscopy

Abstract of UEGW 2017

EUS-guided radiofrequency ablation (RFA) for Pancreatic Neuroendocrine tumor (NET) and pre-malignant introductal pancreatic mucinous tumor (IPMN) : First results of prospective multicenter study

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Background

Pancreatic NET and IPMN with worrisome features required surgical resection due to the respective risk of lymph nodes/metastatic widespread or invasive adenocarcinoma. EUS-guided antitumoral treatments, mainly based on alcohol injection, have been recently developped with the risk of acute pancreatitis due to uncontrolled diffusion and poorly evaluated efficacy. The aim of this prospective study was: primary endpoint, to evaluate the safety of EUS-RFA in such pancreatic tumors ; secondary endpoint: to assess the efficacy in a one year follow-up

Methods

This study was conducted as a prospective multicenter study planned to include 30 patients in a two years period with a one year follow-up. Patients with NET pancreatic tumor less than 2 cm or with pre-malignant pancreatic cystic tumor (side branches IPMN with worrisome features or mucinous cystadenoma (MCA)) were included if they were not operable or refuse surgery. Since October 2015, all the patients have been included, the last one being in January 2017. They were 16 males and 14 females with a 54.4 years mean age (49-84 years). EUS-RFA was performed with a 18G RFA needle (Starmed, Taewong, Korea) applying a 50W current until reaching 100 Ohms impedance (white bubbles appearance).

Results

12 patients had 14 NET with a 13.4 mm size (8-20mm) respectively located in 3 cases to the head, 6 to the body, 1 to the tail. 18 patients had cystic tumor (17 IPMN, 1 MCA) with a 29.1 mm mean size (9-60 mm) respectively located in 14 cases to the head, 3 to the body, 1 to the tail. 10 out of them had mural nodes and 4 increased thickness of the cyst wall. The mean duration of hospital stay was 4 days (2-6). 3 complications (10%) occured, two with the first patients included : one mild pancreatitis, one small bowel perforation surgically managed, one pancreatic ductal stenosis endoscopically managed. After these initial patients, the protocol was improved with prophylactic administration of NSAID and antibiotics and emptying the cyst fluid content leading to dramatic decrease of further complication (3.5%). Three patients experienced mild abdominal pain without acute pancreatitis successfully managed with paracetamol.

10 patients among 12 with NET and 10 patients among 18 with IPMN had at least 6 months follow-up. In NET patients, 6 had complete necrosis or disappearance , 3 diameter decrease >50%, 1 failure. In patients with pancreatic cystic tumors, mural nodes disappeared in 7/8 cases followed, and the cystic tumor disappeared in 5/10 cases.

Conclusions

EUS-RFA management of pancreatic NET or pancreatic cystic tumors is safe with a 10% complication rate that could be decreased with an improved prophylactic protocol study. Looking to antitumoral treatment, promising results are yielded by the initial follow-up.

Abstract of UEGW 2017

EUS-guided radiofrequency ablation of difficult sites in the liver : A preclinical study

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Masayuki Kitano, MD, PhD

Professor and Chairman
Second Department of Internal Medicine
Wakayama Medical University School of Medicine

Introduction

Liver tumors such as hepatocellular carcinoma and liver metastases sometimes occur in positions in which treatment using percutaneous radiofrequency ablation (RFA) is difficult, such as the caudate lobe and surface of the left lobe. EUS-guided RFA (EUS-RFA) can offer an alternative treatment by accessing these tumors through the stomach or duodenum. To the best of our knowledge, only one report has described EUS-RFA of the liver in an animal model, using a 19-gauge EUS-FNA needle with an umbrella-shaped array at the needle.

Aims & Methods

We examined whether a novel 19-gauge RFA needle can be introduced to ablate the liver in a porcine model under EUS guidance.

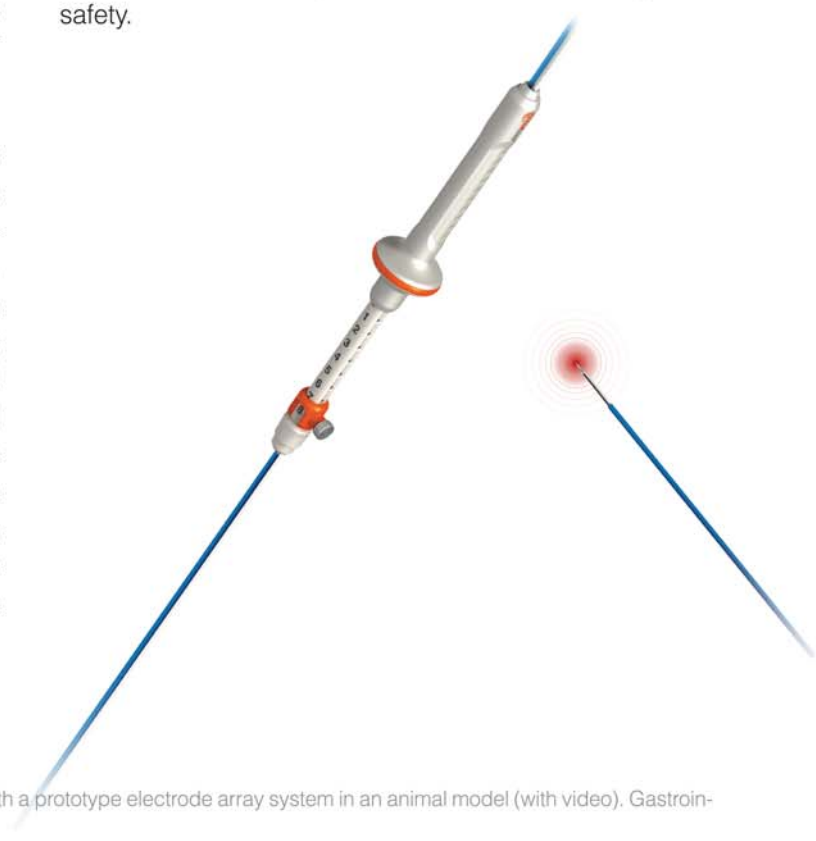
Two pigs were used in this study. All procedures were carried out under general anesthesia. EUSRA™19-gauge needles and a VIVA combo™ generator (TaeWoong Medical, Gimpo city, Korea) were used for the procedures. Three kinds of RFA needles (10-, 15-mm, and 20-mm exposed tips) were used. After the echoendoscope was advanced to the stomach, the RFA needle was inserted into the surface of the left lobe. EUS-RFA was performed at 5-40 W for 2-6 min in general mode. In each pig, three RFA needles with 10-, 15-, or 20-mm exposed tips were serially used for insertion and ablation. Subsequently, the RFA needle with the 10-mm exposed tip was used in the quadrate lobe of the gallbladder through the bulb of the duodenum.

Results

All procedures were technically successful. After the procedure, the liver of the pig was removed, and visible RFA effect were evaluated macroscopically. Histology with hematoxylin and eosin (HE) staining showed coagulative necrosis in the ablated area, corresponding with the macroscopic ablated area.

Conclusion

In this experimental study, EUS-RFA could be performed technically not only in the surface of the left lobe, but also in the adjacent to the gallbladder of the porcine liver. Further studies are required to confirm the efficacy and safety.



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Varadarajulu S, Jhara NC, et al. EUS-guided radiofrequency ablation with a prototype electrode array system in an animal model (with video). Gastrointestinal Endoscopy 2009; 70: 372-376

Abstract of DDW 2017

Efficacy of endobiliary radiofrequency ablation for malignant distal biliary obstruction: Korean multicenter experience of temperature controlled radiofrequency ablation

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Background

Endobiliary radiofrequency ablation (EB-RFA) is an endoscopic local treatment modality in patients with malignant biliary tract obstruction (MBTO). It may provide improvement of stent patency and patient survival, however, hyperthermic injury can induce serious complications such as perforation, bleeding and stricture. We aimed to evaluate the clinical outcomes of EB-RFA in patients with distal MBTO.

Methods

Total 33 patients who underwent temperature controlled EB-RFA (7-10 W, target temperature 80℃, 120 seconds) were retrospectively collected from five academic medical centers. All patients had unresectable distal MBTOs including 21 CBD cancer, 10 pancreatic cancer and 3 GB cancer. After EB-RFA, biliary drainage was maintained by placing a covered/uncovered self-expanding metallic stent (SEMS) or plastic stent. Stent patency, patient survival and EB-RFA related adverse events were analyzed.

Results

Temperature controlled EB-RFA was safely performed in all patients without technical difficulties. The median length of MBTO was 20 mm (12-40), and EB-RFA was followed by placement of biliary stents; 10 covered SEMS, 22 uncovered SEMS and one plastic stent. The median duration of stent patency were 173 days for uncovered SEMS group and 191 days for covered SEMS group. Stent patency rates were 90.0% and 35.0% at 30 and 180 days respectively in uncovered SEMS group, and 100% and 55.5% at 30 and 180 days in covered SEMS group. The cumulative patency of covered SEMS was significantly higher than that of uncovered SEMS after EB-RFA (P=0.041). The 30- 90- and 180-day overall survival after EB-RFA were 97%, 92.8% and 69.4%, respectively. Total incidence of adverse events after procedure was 21% (7/33; 3 pancreatitis, 1 cholangitis and 3 cholecystitis), and there was no major complication such as perforation and hemobilia.

Conclusion

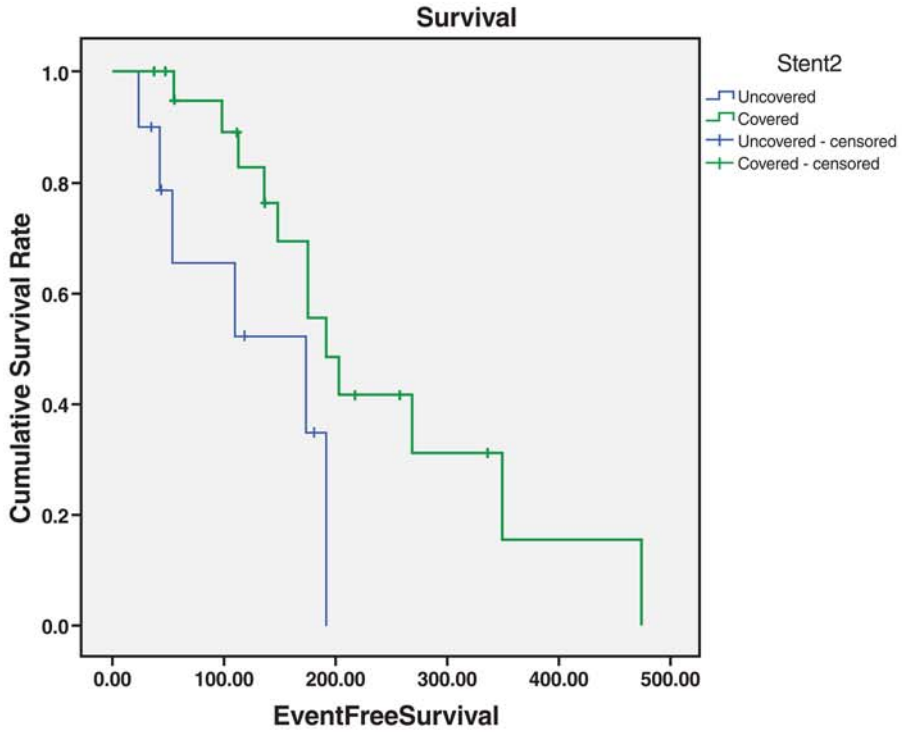
EB-RFA is a safe and effective adjunctive local therapy in patents with distal MBTO. Further prospective randomized studies are warranted to confirm the clinical benefit of EB-RFA.

Key Words

radiofrequency ablation, malignant biliary tract obstruction, endoscopic local ablative treatment

Table 1. Baseline characteristics of patients

	Uncovered SEMS (n=10)	Covered SEMS (n=22)	P
Median stent patency (days)	173 [32 - 314]	191 [140 - 242]	0.047
Stent occlusion, n (%)	3 (30.0)	7 (33.3)	> 0.999
Complications, n (%)			
Pancreatitis	0 (0)	2 (9.1)	0.089
Cholangitis	0 (0)	1 (4.5)	> 0.999
Cholecystitis	0 (0)	3 (13.6)	0.534



ERCP guided biliary radiofrequency ablation - Preliminary experience in 12 patients

PRODUCT EXPERIENCE

Marc Giovannini M.D

Head of Endoscopy Unit
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Marseilles, France

Introduction

ERCP guided RFA is a new tool in the armamentarium against biliary tumors. Biliary RFA has a direct impact on the survival time of patients treated for a cholangiocarcinoma. A recent application is the treatment of residual biliary adenomas after endoscopic ampullectomy for ampullary tumor. We report our preliminary experience.

Patients and Methods

Between May 2015 and September 2016 we performed 12 ERCP guided radiofrequency under sedation (propofol) using a Viva Combo™ Starmed probe (Taewoong) of 18 or 33 mm (n = 12) in 8 males and 4 females (median age 62 years).

Radio frequency	Indications	Type of application	Associated procedure
Biliary 12 sessions (12 patients)	Post ampullectomy n=7 Cholangiocarcinoma n=5	2 mn 75°C 10W	Preventive treatment of acute pancreatitis by NSAIDs and transient plastic pancreatic stent - antibioprophylaxis - covered metal stent to avoid secondary stenosis

Results

No severe complications (acute pancreatitis, hemorrhage) or mortality were attributable to the RF technique. There is a single hemorrhage related to ampullectomy performed at the same time but not due to RFA. The treatment was well tolerated and hospitalization time was less than 2 days. This procedure could be easily repeated depend on disease evolution.

Evaluation of the 5 patients with a cholangiocarcinoma was difficult to achieve because other treatments as radio-chemotherapy were applied but the 7 patients treated for a residual adenomatous tissue in the lower part of the CBD after endoscopic ampllectomy achieved a complete response with no relapse after a median time of 9 months

Conclusion

ERCP guided biliary RFA is simple, safe and very efficient in patient with residual adenomatous tissue in the lower part of the CBD after endoscopic ampllectomy.

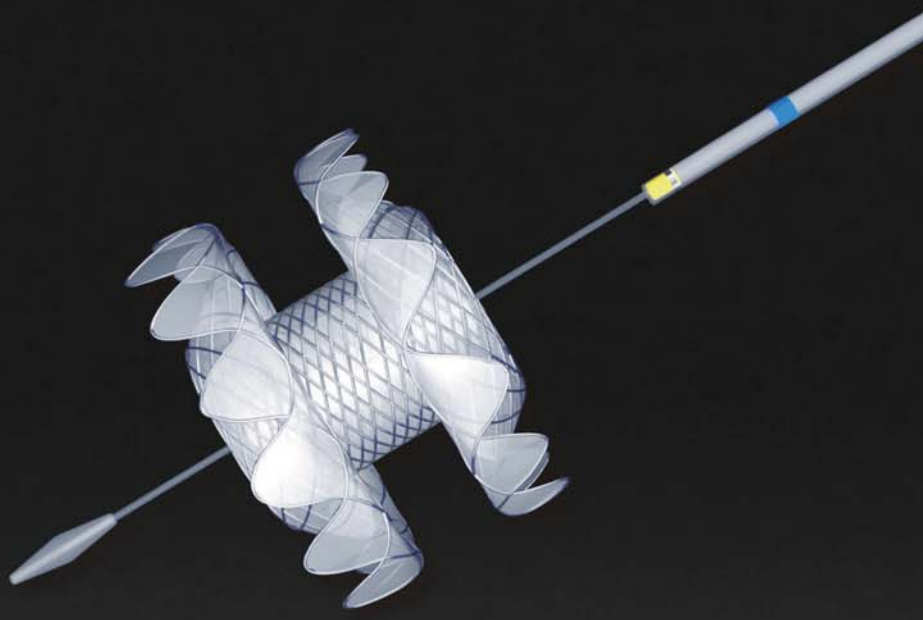
It's a local treatment of deep organs tumors (such as pancreas biliary tract or lymphadenopathy) difficult to realize by percutaneous access. This minimally invasive technique for selective mass destruction could increase efficiency of neo adjuvant treatment. These preliminary results confirm others studies and feasibility. Nevertheless in the current state of knowledge this treatment must be reserved to palliative medical cases. Obviously further prospective studies should be mandatory to confirm it.

Limitation

Feasibility study. Low patient numbers and short follow up.

MEMO

Taewoong NiTi-S™



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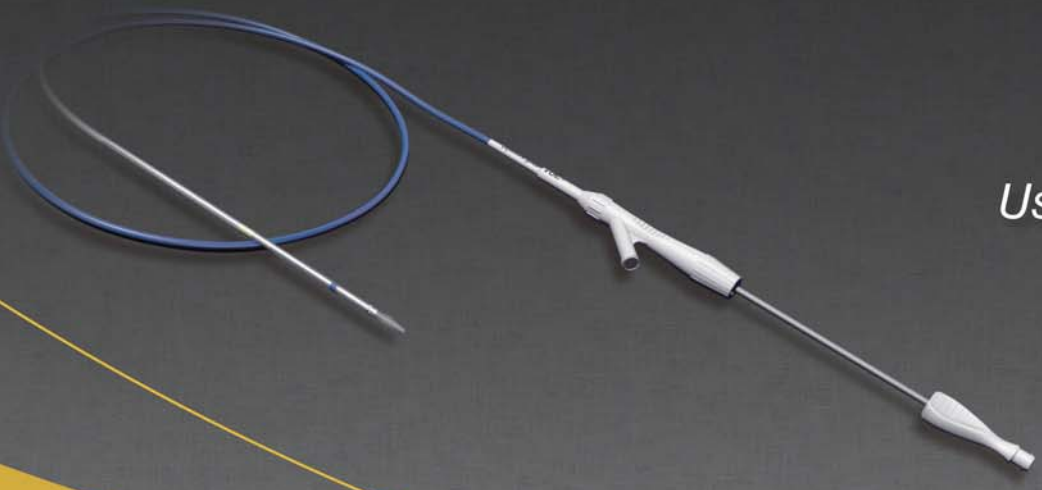

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by Jong H.Moon et al [Gastrointest Endosc 2014;79:990-995]

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by Takao Itoi et al [Gastrointest Endosc 2013;78:934-939]

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